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EDUCATION & PROFESSIONAL STATUS

Water Services:

City & Guilds Certificate, the Certificate for Utility Operations
– Water Distribution - Water Regulations for Enforcement Staff.

Merchant Navy & General Engineering Qualifications:

B.O.T. 1st Class Certificate of Competency (Motor).
O.N.D. & Endorsement in Marine Engineering.

United Kingdom Accreditation Service:

Assessor Training Course.
Uncertainty of Measurement Course.

PROFESSIONAL MEMBERSHIPS

FCIPHE. (RP) IEng. IMarEng. M.I.MarEST.
UK Register of Expert Witnesses.

KEY AREAS OF EXPERTISE.

- Mechanical and Marine Engineers with wide experience in the operation of all areas of Power Plant Operation, its Installation and Commissioning.
- Installation, commissioning and use of a wide range of Pumping Systems for many duties. This experience has been widely shared with the designers of packaged Pump Systems for use with Wholesome Water. It has also been of benefit in the design of Heating Systems within Domestic and Commercial Properties.
- Design of Domestic and Commercial Wholesome Water Systems.
- The requirements of Thermostatic Mixing Valves within domestic and commercial premises.
- The application of the Water Supply (Water Fittings) Regulations, Water Supply (Water Quality) Regulations and the Building Regulations to building water systems.
- Legionellae and other waterborne bacteria risk management.

KEY PROFESSIONAL EXPERIENCE.

RAH CONSULTANCY. 2004 – To date.

A company operating in those areas of Water Engineering Consultancy with which I, Richard Hurst, became familiar in my previous career. This included advising customers of the requirements with regard to Water Regulations, for the design and launch of a new product ranges, and advice on the suitability of devices for installation in accordance with these Regulations.

RAH Consultancy has recently celebrated its 10th Anniversary and now employs three keen trainee staff.

PROFESSIONAL DEVELOPMENT.

I am a Fellow of the Chartered Institute of Plumbing and Heating Engineering and have recently become a Registered Plumber. This qualification allows me to operate as an Approved Contractor within the meaning of the Water Supply (Water Fittings) Regulations 1999. I can therefore “sign-off” plumbing systems on works carried out by or under my direction as being compliant with the Water Regulations. I have long been an Incorporated Engineer and am now actively applying for promotion to chartered status under the auspices of CIPHE.

I have recently produced several articles which have appeared in the Solicitor’s Journal and the P&HE Journal. Two of these articles have related to the use of Thermostatic Mixing Valves in differing installations and the latest article is with regard to Plumbing Products and the requirements for CE Marking. Further articles are in production.

I have been co-opted onto a Technical Committee of the Chartered Institute and have been asked to form an Institute editing committee. The exact form of the task is still being decided but this will allow me to remain in contact with all the latest developments on our profession.

KEY CONTRACTS

- I act as the Secretary of the Advisory and Audit Committee of the KIWA Watertec Water Regulations Approval Scheme and the KIWA expert group for their Certification Scheme. These Committees acts as the overseeing body for the Schemes which offers approval of products to the requirements of the Regulator's Criteria and Certification of products to a range of Standards. The Committees operate as the overseeing body which ensuring the probity of operation of KIWA. I have acted as Secretary of the AAC since 2008.

Consultancy Projects.

- Operating in cooperation with Magic Thermodynamic Box Ltd in the provision of technical support for this revolutionary Company. We are proud to be involved in the ongoing development of this product and to be able to comment on the extensive laboratory testing and field work that they are undertaking. RAH Consultancy has also advised on the production of company's literature.
- Designing a course and then acting as a lecturer with regard to the current Water Regulations and the Installation, Commissioning and Testing of Thermostatic Mixing Valves meeting TMV2 and TMV3 requirements. The work included the provision of all course notes, exam papers etc for an in-house City and Guilds course on behalf of a large water condition monitoring organisation. The work was designed to increase the operating capabilities of this company's staff.
- Work for a Manufacturer of Jug Filters regarding the design of a new product range for direct connection to the water supply. The gaining of WRAS product certification for the product's use within the UK was obtained and further worldwide launches are to follow.
- The provision of detailed research regarding the fitness for purpose of various Water Conditioners; this research was conducted on behalf of the Advertising Standards Authority. The culminating reports were used in assessing the content of a number of adverts regarding such devices.
- Advising the Dutch National Test-house KIWA on the design and testing of Thermostatic Mixing Valves for Domestic and Health-Care applications.
- Designing a Thermostatic Mixing Valve so as to comply with the requirements for anti-scalding TMV2 and TMV3 Schemes. The work was for a major manufacturer of this type of device, the time scale for the delivery of the project was under serious threat, RAH Consultancy was called in and under took extensive examination of their design. Within a small time frame we were successful in producing design changes with which it was possible to return the project to schedule.

Water Regulations.

- We have recently completed work as Consultants for Mace Ltd providing them with our expertise with regard to the Water Regulations. This was one of our major ongoing projects and we pride ourselves on our selection by Mace Ltd to carry out this work. RAH Consultancy were responsible for examining the documentation regarding every aspect of the water system design and equipment which was to be used. On our recommendation equipment which was to be used may be deferred until it satisfies the Regulations and may even be refused. The work of course relies on close liaison with Thames Water and their Trust in the integrity of our operations.

The work was completed in advance of schedule and all the operations were signed off by Thames Water without the need for any redesign or replacement of the water system installed.

Due to our success with this project we have been selected to quote for a further and larger construction project which is shortly to begin.

- Currently acting for Challis Water Controls in the preparation of the documentation for their Water Regulations and Buildcert Approvals. This will entail the identification of the materials of construction of the devices and some design changes will be advised to satisfy the technical aspects of the Regulations. This work has already resulted in the consultants providing advice to the client with regard to aspects of the Thermostatic Test Rig design at the factory. This has enabled them to test a series of Thermostatic Valves that have since achieved both TMV2 and TMV3 certification.
- Another of our major customers was one of the world's leading medication manufacturers. We were engaged to undertake the inspection regarding water systems at one of their research facilities. Undertaking the necessary surveys, RAH Consultancy drew up an action plan for this organisation, a meeting with the local Water Undertakers Inspector resulted and our recommendations were accepted.
- We acted as the Technical Consultant for Crosswater Ltd regarding the requirements of the Water Regulations. The work was ongoing for seven years and included the inspection of the quality of proposed purchases, advice on necessary technical alterations to specifications and the gaining of WRAS certification for their products. We were able to advise the client on changes to their materials of construction and the sourcing of components that were needed to meet the Regulations.
- RAH Consultancy worked with a UK representative of a major eastern manufacturer on the materials of construction required for a range of Water Storage Cisterns. This work involved liaising with the UK Materials Testing Houses to arrange for the testing of various products necessary for the design. We were able to provide the client with advice with regard to Singapore and British Standards for the testing of the product; and explain these requirements to the client in a series of reports.
- Inspection of the complete water system within a Superstore so as to ensure that the store was in compliance with the Water Regulations, provision of a report as to alterations necessary so as to make the building fully compliant.
- We acted as a Consultant to an Unvented Water Heater Manufacturer in the gaining of their Water Regulations Certification; this included the provision of material samples which were necessary to undertake testing to BS6920.
- Gaining Certification of different manufacturer's ranges of Thermostatic Mixing Valves. This work was carried out for five manufacturers in total and included submission of application forms and assembly of working drawings, statements of "listed materials etc. All submissions were successful.
- Design of a Type DC Backflow Prevention device for the manufacturer of a range of invalid bathing equipment. The design of the back-flow prevention device exclusively for use on the invalid bath required the manufacture of prototype devices. The testing of the device prior to its submission to the Test and Assessment Group of the WRAS and negotiation with the panel as to its suitability to meet the requirements for this type of device and as to its meeting the design requirements of the relevant European Standard. The device gained acceptance and is now a "listed" product. The work required RAH Consultancy to travel extensively to Austria where the design work was undertaken and advise on the testing of the product during its inception.

Expert Witness Experience

- Providing Expert advice regarding a Legionella death at a hotel premises in Egypt, the work covered the inspection of all the records regarding the Hotel's inspections and risk analysis. The expert considered the requirements of various countries including Australia and the United States so as to compare their requirements with the International Legionella advice provided for the hotel sector. The resulting report was discussed between the opposing experts but it was found to be impossible to agree a joint statement, the resulting case was settled in favour of our client, the widow of the person concerned.
- Acting on behalf of a water user and water undertaking as a joint expert witness; with regard to water metering of a property. The report concerning the property drew upon the author's widespread knowledge of water metering and was used in the case to advise the court as to the correct provision of water meters for the property and the likelihood of failure in service.
- The provision of expert evidence with regard to the use of hose union bib taps within a range of farm buildings. Appearance in court acting as an expert on behalf of a farmer with regard to his property and Water Regulation violations.
- Provision of an experts report with regard to a bore-hole system on a country property in the north of England. Inspection of the property water supply, taking of water samples and instructing the laboratory on the required testing. Provision of a report on the boreholes compliance with good practice and the necessary rehabilitation of the same.
- Advising the householders of a property in North Wales as to the quality of the plumbing and heating systems within their premise. Providing a detailed report as to the systems compliance with the Water Regulations and to BS 6700 and the Plumbing Design Guide. Negotiation with the Builder as to the requisite actions to be taken. On his eventual agreement with the reports findings the total plumbing system was redesigned by myself, working drawings provided and all the plumbing re-installed in accordance with best practice. The plumbing works was overseen by myself, and was installed and commissioned to the complete satisfaction of the building's owner and without occasion to go to court.
- Advice regarding the failure of a water supply system within a hotel situated in Northern Ireland where the local water undertaking and his contractor who had been conducting a mains water-pipe repair in the area. Testing of the failed fitting and provision of a report on the failure.

Previous Experience

WRc-NSF. 1989 – 2004

Between the above dates Richard Hurst worked for the well known and respected consultancy company, WRc. This company was privatised in 1989 and was formerly the research and advisory arm of the water industry. This role was retained after privatisation and he was employed in the advisory role to the water industry, particularly with regard to Water Regulations and their predecessor, Water Byelaws.

He was promoted to Contract Manager, with responsibility for all testing services which were outside the company's testing of products and fittings for Water Byelaws compliance. He was also made responsible for all Water Byelaws related consultancy.

He was finally promoted by WRc-NSF, (after the amalgamation of WRc with the major American testing body NSF); to Senior Account Executive. His role was to maintain all previous management and contract responsibilities but also to undertake a major new sales role with regard to the company's new Certification Scheme "Buildcert". "Buildcert's" function was to further expand the company testing role so as to encourage full product approval, assessment and certification, in addition to the Regulation's compliance.

During this period he was also acting for some time as the internal quality control auditor for all laboratory systems under the auspices of UKAS.

In particular he was proud to be responsible for the commissioning of the water meter test rig built for use in the laboratory. He suggested design improvements and authored the laboratory control procedures, test and calibration procedures, quality control procedures, and uncertainty of measurement calculations for this test rig. He subsequently designed and built extensions to this rig so as to enable testing of large bore meters and single and multi jet meters to be undertaken, He was responsible for obtaining initial NAMAS and later UKAS Accreditation for these rigs and maintaining the accreditation in subsequent years.

He was responsible for the initial ideas that lead to the initiation by the Health Service of the D 08 Standard for the testing and third party certification of Thermostatic Mixing Valves for Health Care Premises. This included sitting on the expert's panel which wrote the Standard. He then promoted the plan to manufacturers of the products that lead to the initiation of the TMV3 Scheme and its successful incorporation into WRc-NSF's range of testing services. This has continued to provide an ongoing annual revenue boost for the laboratory.

In carrying out this process he was once again solely responsible for writing laboratory test and calibration procedures, rig design, training of laboratory staff and gaining of UKAS Certification at the first attempt.

KEY ROLES.

Water Regulations Advisory Service (WRAS).

(WRc-NSF managed on behalf of the UK Water Industry the advisory scheme set up to ensure the General Public, Plumbers, Water Fittings Manufacturers etc have access to current advice with regard to the installation and design of water fittings and water systems. WRAS was preceded by a similar scheme operated by WRc with regard to the Water Byelaws.)

Richard Hurst held a key position in the provision of these services as he was responsible for all consultancy contracts arising from Manufacturer's requirements for design and installation advice. Consultancy was offered to provide designers, operators and users of the UK water supply with guidance as to the design and installation of water supply fittings and installations; so as to ensure they were capable of meeting the requirements of the appropriate regulations. New products in particular would often require interpretation of the requirements of the regulations in areas where no previous official guidance existed.

Assessment of the project would enable advice on initial design and interpretation of the regulations to be given to the customer, whilst also presenting to the water industry and regulator (when necessary); the suggested design and interpretation for their agreement. The service always endeavoured to reach the most cost effective and pragmatic solution for the manufacturer whilst ensuring the correct interpretation and application of the Byelaws or Regulations.

Projects undertaken for WRc-NSF over the last 10 years of his working for the company numbered in excess of 500. The majority involved the failure of a water-fitting to be properly designed, manufactured, or installed. In many cases Water Byelaws or Regulation infringements had occasioned or exacerbated the failure.

Overseas Consultancy.

WRc-NSF was also an acceptable laboratory for the testing of products for Australian and United States Water Standards. Richard Hurst actively sought out overseas Certification Bodies and negotiated agreements so as to provide WRc-NSF consultancy services to manufacturers. This service would provide design information and product assessment to ensure compliance with relevant local legislation in Australia and the United States.

Failure Consultancy.

Clients from the manufacture, installation, use or insuring of water-fittings and systems sought advice on the failure or effectiveness of such systems and devices. Analysis of the articles concerned could be provided,

or of their method of installation, and reports submitted that assessed the claim and suggested cause and remedy. These reports were often the basis of expert witness cases.

Consultancy Projects.

These covered many areas of expertise arising principally from his laboratory experience and expert engineering knowledge. Details of these can be made available on request.

Expert Witness Experience.

Richard had been engaged in a considerable number of Expert Witness cases on behalf of a range of clients. The work has concentrated on the provision of advice with regard to Regulation within the Water Industry and the correct installation or fitness for purpose of water-fittings. In many cases settlement was reached on production of the initial report and the court-cases were not proceeded with.

Details of these cases can be made available on request.

PRE WRC EXPERIENCE.

SELF EMPLOYED 1984 – 1988.

Contractual work on engineering projects including expatriate operation and maintenance of mainly diesel powered power stations throughout the world.

HAWKER SIDDELEY POWER ENGINEERING LTD. 1980 – 1983.

I worked as a Mechanical Commissioning Engineer; in charge of a team of five persons. The work was undertaken on heavy oil driven power stations at New Marte, Nigeria, and the North Mole, Gibraltar. The two stations required commissioning after completion and due to delays in construction Richard Hurst was also involved in the installation of copper and galvanised piping systems, pumps and vessels so as to enhance the station delivery.

TILSLEY & LOVATT LTD 1978 – 1980.

For one year I worked on the installation and construction of engines and pipe-work at the New Marte power station in Nigeria. Prior to this I was engaged on large engine overhaul projects at sites within the UK at Beaconsfield, Skelmersdale and Avonmouth.

CANADIAN PACIFIC 1976 – 1978.

Served as the Second Engineer Officer on the bulk carrier fleet of Canadian Pacific. Served on a range of vessels of up to 250,000 tons. Completed two voyages, as officer with full responsibility for the operation of planned maintenance systems upon these vessels. My career at sea was terminated by an accidental slip and fall down a ship's hatch whilst dry docking in Setubal, Portugal, this resulted in a fractured pelvis that required six months recuperation.

OCEAN FLEETS 1966 – 1976.

Served in all ranks from Cadet Engineer Officer to Second Engineering Officer. Completed a five and a half year apprenticeship that included six months experience within the companies own workshops and with the ship repair shore based staff. Attained a First Class Certificate of Competency and sailed as Second Engineer Officer at the early age of 26. Experienced in a wide range of engineering disciplines and able to operate and make decisions without reference to higher authority.

